DOCUMENT RESUME

ED 380 291 SE 055 947

AUTHOR	Westbury, Ian, Ed.; And Others
TITLE	In Search of More Effective Mathematics Education: Examining Data from the IEA Second International Mathematics Study.
REPORT NO	ISBN-1-56750-061-7
PUB DATE	94
NOTE	338p.
AVAILABLE FROM	Ablex Publishing Company, 355 Chestnut Street, Norwood, NJ 07648 (hardback: ISBN-1-56750-060-9; paperback: ISBN-1-56750-061-7).
PUB TYPE	Books (010) -- Collected Works - General (020)
EDRS PRICE	Document Not Available from EDRS.
DESCRIPTORS	*International Studies; Learning Theories; Mathematics Achievement; *Mathematics Instruction; *Research Methodology; *School Organization; Secondary Education; *Sex Differences; *Social Structure
IDENTIFIERS	*Second International Mathematics Study

ABSTRACT

This book, in three parts, presents a set of studies that: (1) explores some significant questions about mathematics teaching and learning and (2) illustrates new methodologies for the analysis of new kinds of questions about mathematics education. The data from the Second International Mathematics Study (SIMS) are the starting point for all of the work reported here. The book includes 11 chapters organized in 3 parts. Part 1, Teaching and Learning Mathematics In Classrooms includes: (1) "When Teaching Problem-Solving Proceeds Successfully in U.S. Eighth Grade Classrooms" (L. A. Sosniak & C. A. Ethington); (2) "Student Opportunities in Grade 8 Mathematics: Textbook Coverage of the SIMS Test" (J. Flanders); (3) "The Myth of Progressive and Traditional Orientations: Teaching Mathematics Without a Coherent Point of View" (L. A. Sosniak, C. A. Ethington & M. Varelas); and (4) "Is the United States Really a Low Achiever in Math? The SIMS Findings Re-examined" (I. Westbury). Part 2, School Structures, Social Structures, Gender and Mathematics Education includes: (5) "What Makes for Effective Mathematics Instruction? Japanese and American Classrooms Compared" (M. Schaub & D. P. Baker); (6) "The Effects of Central Control on Classroom Practice" (P. L. Glidden); (7) "Gender Groupings and Improving Mathematics Achievement: Lessons from a Comparative Analysis" (D. P. Baker, C. Riordan, & M. Schaub); and (8) "Assessing the Differential Item Performance of Females in Japan and the United States" (D. L. Harnisch). Part 3, New Methodologies for Research in Mathematics Education includes: (9) "Conceptual and Statistical Problems in the Study of School and Classroom Effects: An Introduction to Multilevel Modeling Techniques" (D. P. Murchan & F. C. Sloane); (10) "Schooling and Achievement: Additive versus Interactive Models" (A. Gamoran); and (11) "Instructionally Sensitive Psychometrics: Applications to the Second International Mathematics Study" (B. O. Muthen). Author and subject indexes are included. (MKR)